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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,321	08/10/2001	Dirk Walther	ICYTP011	4696

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EXAMINER

MAHATAN, CHANNING

ART UNIT PAPER NUMBER

1631

DATE MAILED: 05/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/927,321

Applicant(s)

WALTHER ET AL.

Examiner

Channing S Mahatan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 6-28 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-28 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 2001 and 18 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1 Sheet.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

APPLICANTS' ARGUMENTS

Applicants' arguments/amendments filed 27 February 2004 have been fully considered and are deemed to be persuasive.

CLAIMS UNDER EXAMINATION

Claims herein under examination are claims 1-5. Claims 29-61 have been cancelled.

Election/Restriction Requirement

The elected invention ('Election' filed 03 November 2003) was drawn to a method, computer program product, and computing device for determining a sequence of a nucleic acid polymer. However, only claims 1-5 (method claims) remain drawn to the elected invention.

Currently amended claims 6-28 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claims 6-28 are drawn to a method, computer program product, and computing device for assessing the reliability of assigned basecalls in a nucleic acid sequence determination.

The inventions of claims 1-5 (elected Group I) and claims 6-28 are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (M.P.E.P. § 806.04, M.P.E.P. § 808.01). In the instant case the different inventions are directed to methods having different functions, different effects, and different modes of operation. The function(s)/mode of operation of claims 1-5 (elected Group I) is for determining a sequence of a nucleic acid polymer; wherein said method requires: 1) obtaining data traces from an electrophoresis detection apparatus; 2) combining data traces via a cross-correlation coefficient to yield a

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composite trace; 3) detection peaks in the composite trace; and 4) determination of the sequence by assigning basecalls. The function(s)/mode of operation of claims 6-28 is to assess the reliability of assigned basecalls in a nucleic acid sequence determination. Although, claims 6-28 do not explicitly state steps for the assessment of reliability, considerable weight has been given to the preamble of these claims and therefore would require additional steps for the assessment of reliability. The determination of sequence would result in a final sequence, whereas reliability of basecall assignment is implied to result in a value (i.e. numerical) of the quality of said assignment. Additionally, the originally elected claims contained no such assessment of reliability assigned basecalls. Thus, the inventions of claims 1-5 (elected Group I; method of determining a sequence of a nucleic acid polymer) and claims 6-28 (drawn to a method, computer program product, and computing device for assessing the reliability of assigned basecalls in a nucleic acid sequence determination have different functions, different effects, and different modes of operation.

Because these inventions are distinct for the reasons given above, have acquired a separate status in the art because of their recognized divergent subject matter, and the search for each Group would require a non-coextensive non-patent literature search (the search required for one group is not required for any of the other groups), restriction for examination purposes as indicated is proper.

Since Applicants have received an action on the merits for the originally presented invention (i.e. method for determining a sequence of a nucleic acid polymer), this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly,

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claims 6-28 are withdrawn from consideration as being directed to a non-elected invention. See 37 C.F.R. § 1.142(b) and M.P.E.P. § 821.03.

ALLOWABLE CLAIMS

This application is in condition for allowance except for the presence of claims 6-28 to an invention non-elected. Applicants are requested to cancel the above noted claims or take other appropriate action.

ACTION IS FINAL, NECESSITATED BY AMENDMENT

Applicants' amendment necessitated the new restriction group (claims 6-28; drawn to a method, computer program product, and computing device for assessing the reliability of assigned basecalls in a nucleic acid sequence) presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See M.P.E.P. § 706.07(a). Applicants' are reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 C.F.R. § 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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EXAMINER INFORMATION

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 C.F.R. § 1.6(d)). The CM1 Fax Center number is either (703) 872-9306.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Channing S. Mahatan whose telephone number is (571) 272-0717. The Examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Woodward, Ph.D., can be reached on (571) 272-0722.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instruments Examiner, Tina M. Plunkett, whose telephone number is (571) 272-0549 or to the Technical Center receptionist whose telephone number is (703) 308-0196.

Date: May 25, 2004

Examiner Initials: CSU1

Marianne P. Allen
MARIANNE P. ALLEN
PRIMARY EXAMINER 5/25/04
AU1631